

Patent claims

1. A bearing assembly (1) with at least one first bearing (6) as an axially free radial support (5) and with at least one second bearing (8) as a radially free axial support (7), the bearings (6, 8) having a common axis of rotation (19) and at least a first bearing ring (9) of the first bearing (6) and a second bearing ring (10) of the second bearing (8) being rotationally fixed in relation to at least one bearing seat, characterized in that the first bearing ring (9) and the second bearing ring (10) lie axially opposite each other and the second bearing ring (10) is thereby coupled with the first bearing ring (9), contactlessly in relation to the bearing seat, in a form-locking/rotationally fixed manner.

2. The bearing assembly as claimed in claim 1, characterized in that the first bearing ring (9) and the second bearing ring (10) are coupled in a form-locking manner by means of at least one connecting element (13) and the connecting element (13) thereby engages in a form-locking manner in at least one corresponding clearance (15) on one of the bearing rings (9, 10).

3. The bearing assembly as claimed in claim 2, characterized in that the connecting element (13) is formed separately from the first bearing ring (9) and from the

second bearing ring (10), the connecting element (13) engaging at least axially in one clearance (15) respectively on the first bearing ring (9) and on the second bearing ring (10).

4. The bearing assembly as claimed in claim 3, characterized in that the connecting element (13) is a Woodruff key (14), the Woodruff key (14) engaging radially and axially in the clearances (15).

5. The bearing assembly as claimed in claim 1, characterized in that the bearing seat is a housing (3, 4), the first bearing ring (9) being fixed on the housing (3, 4).

6. The bearing assembly as claimed in claim 5, characterized in that the bearing seat is a bore (11) in the housing (3, 4), the first bearing ring (9) being accommodated in the bore (11) in a rotationally fixed manner in relation to the housing (3, 4).

7. The bearing assembly as claimed in claim 5, characterized in that the first bearing ring (9) and the second bearing ring (10) are at least partially engaged around by the housing (3, 4), the first bearing ring being fixedly seated in a bore (11) and that the second bearing ring (10) is surrounded circumferentially on the outside by a radial air gap (12) between the housing (3, 4) and the second bearing ring (10).

8. The bearing assembly as claimed in claim 7, characterized in that the first bearing ring (9) and the second bearing ring (10) axially enter the bore (11) at least partially and the bore (11) is thereby described at least around the first bearing ring (9) and around the second bearing ring (10) by an inside diameter that is the same throughout.

9. The bearing assembly as claimed in claim 7, characterized in that the first bearing ring (9) and the second bearing ring (10) axially enter the bore (11) at least partially and the bore (11) is thereby axially divided at least into a first portion (11a) and a second portion (11b), the portions (11a, 11b) having inside diameters that are different from each other and the first portion (11a) running at least partially around the first bearing ring (9) and the second bearing ring (10) thereby being arranged outside the first portion (11a) and radially separated from the second portion (11b) by the air gap (12).

10. The bearing assembly as claimed in claim 1, characterized in that the first bearing (6) and the second bearing (8) are rolling bearings with rolling bodies.